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PENSOFT

First documented records of *Lugensa brevirostris* (Lesson, 1831) and *Phoebetria palpebrata* (Forster, 1785) for the state of São Paulo, southeastern Brazil (Aves, Procellariiformes)

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Abstract

The order Procellariiformes comprises mainly oceanic species that are occasionally recorded from along the Brazilian coast. We presents the first records of *Lugensa brevirostris* (Lesson, 1831) (Kerguelen Petrel) and *Phoebetria palpebrata* (Forster, 1785) (Light-mantled Albatross) for the state of São Paulo, Brazil. Both species were recorded from the municipality of Ilha Comprida. *Lugensa brevirostris* was recorded on 25 May 2016 and *P. palpebrata* on 3 October 2016. Therefore, we add 2 important records to the Brazilian avifauna and suggest the inclusion of both species on the list of birds in São Paulo.

Keywords

New records; coast; Kerguelen Petrel; Light-mantled Albatross; seabirds; Ilha Comprida; beach monitoring.

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Introduction

The order Procellariiformes comprises pelagic species with representatives distributed in all oceans (Harrison 1983). In Brazilian seas, they are represented mainly by young individuals that roam the oceans until they reach sexual maturity, adults in migration and birds that reach the area during breeding periods, when performing long foraging trips (Bugoni and Furness 2009). *Lugensa brevirostris* (Lesson, 1831), Kerguelen Petrel, breeds in Tristan da Cunha and Gough Islands (Atlantic Ocean) and in Marion, Prince Edward, Crozet, and Kerguelen islands (Indian Ocean) and occurs in waters of the Southern Hemisphere (Harrison 1983). Documented records of this species in Brazil are scarce: the first, in September 1985 was a bird found stranded in the state of Bahia (Teixeira et al. 1988); the second, in October 1986 was at Praia do Cassino on the southern coast of Rio Grande do Sul (Vooren and Fernandes 1989); the third record, in July 1994 was a male found in Arembembe, Bahia (Lima et al. 2004). The fourth and most recent record of this species was made in September 2012 at Arraial do Cabo, state of Rio de Janeiro (Mauricio et al. 2014).

Phoebetria palpebrata (Forster, 1785), Light-mantled Albatross, breeds in sub-Antarctic islands, such as South Georgia in the Atlantic Ocean (Thomas et al. 1983, Black et al. 2013) and Macquaire (Terauds and Gales 2006) and Prince Edward (Berruti 2016) in the Indian Ocean. It has

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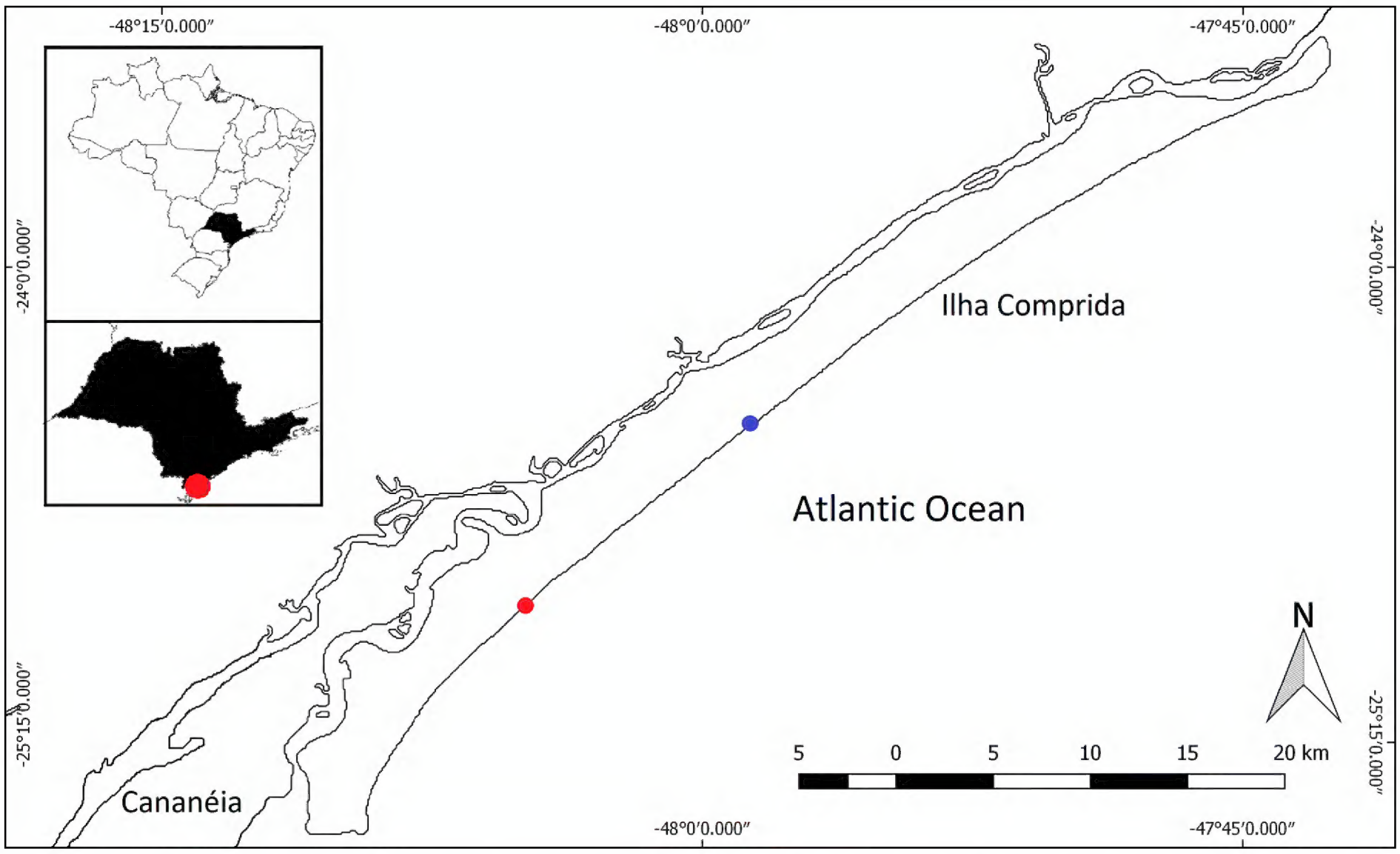

Figure 1. Map of where *Lugensa brevirostris* (blue circle) and *Phoebetria palpebrata* (red circle) were found at the municipality of Ilha Comprida, state of São Paulo, southeastern of Brazil.

a more restricted distribution, occupying the Antarctic and sub-Antarctic circumpolar region (Harrison 1983). In Brazil, stranded specimens have been found in the states of Bahia (Grantsau 1995, Sampaio and Castro 1998, Lima et al. 2004), Rio de Janeiro (Correia and Pereira 2016), and Santa Catarina (Roos and Piacentini 2003).

We provide the first documented records of *L. brevirostris* and *P. palpebrata* for the state of São Paulo, southeastern Brazil.

Methods

The 2 records occurred in the municipality of Ilha Comprida in the south coast of the state of São Paulo (Fig. 1). The specimens were found during daily beach-monitoring surveys of "Projeto de Monitoramento de Praias da Bacia de Santos" (PMP-BS). The PMP-BS covers the entire south coast of the state (comprising a total of 100 km/day). The identification and sexing of specimens were based on morphological characters.

In both cases, we attempted to determine the sex through Necropsy. Morphometry was done using a caliper (precision of 0.1 mm) and ruler (precision of 1 mm) for the following characters: total length (beak to tail), head length (from the nape to the tip of the beak), exposed culmen (in parallel to the beak), wing chord (from the curvature of the natural wing to the extremity of the feathers), tail (from the base to the end of the feather), tarsus (from the ankle joint to the knee joint), middle toe with claw (length of the phalanges with claw), middle toe without claw (length of the phalanges without claw) and wingspan (measured from the end of 1 wing to the other).

Results

New records (Fig. 1). *Lugensa brevirostris.* Brazil: São Paulo state: municipality of Ilha Comprida: (24°51.27′ S, 047°41.91′W), collected by Daniela Mello, Verônica Marques and Bruna Maldaner (Instituto de Pesquisas Cananéia), 25 May 2016, 14h25, 1 individual (not vouchered). The petrel was rescued alive at but survived only 1 day.

Phoebetria palpebrata. Brazil: São Paulo state: municipality of Ilha Comprida: (24°56.58′ S, 047°48.52′ W) , collected by Priscilla Carla dos Santos Costa, Verônica Marques and Bruna Maldaner, 3 October 2016, 10h33, 1 individual (voucher deposited in Instituto de Pesquisas Cananéia, IPeC 057). The bird was found dead, but a local informed us that it was alive the previous day.

Identification. *Lugensa brevirostris.* Compared to other species (such as the dark morph of *Pterodroma arminjoniana*), the plumage of *L. brevirostris* is more silvery, its head volume relative to the body is approximately 1/3 of its whole-body length, and its beak is short and narrow (Fig. 2). The morphometries were as follows: total length 332.0 mm; head length 73.0 mm; exposed culmen 28.6 mm; wing chord 248.0 mm; tail 75.0 mm; tarsus 43.0 mm; middle toe with claw 45.7 mm; middle toe without claw 41.9 mm; wingspan 808.0 mm. These measurements were similar to Lima et al. (2004) and Mauricio et al. (2014). It was not possible to identify the bird's sex.

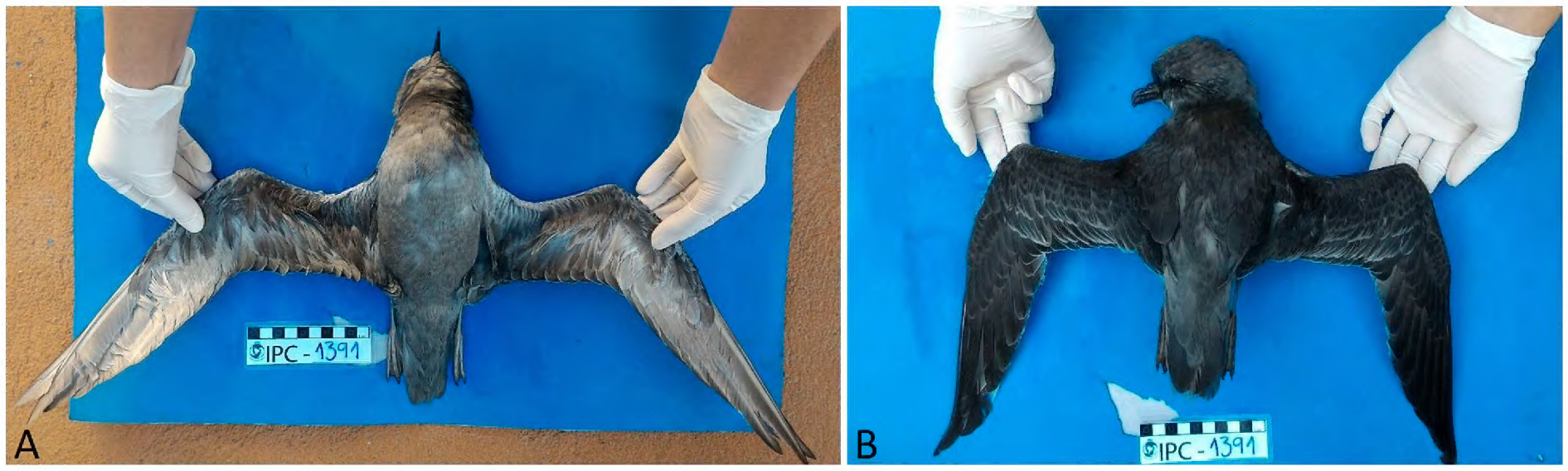

Figure 2. *Lugensa brevirostris*, municipality of Ilha Comprida, state of São Paulo, Brazil. **A.** Ventral view. **B.** Dorsal view.

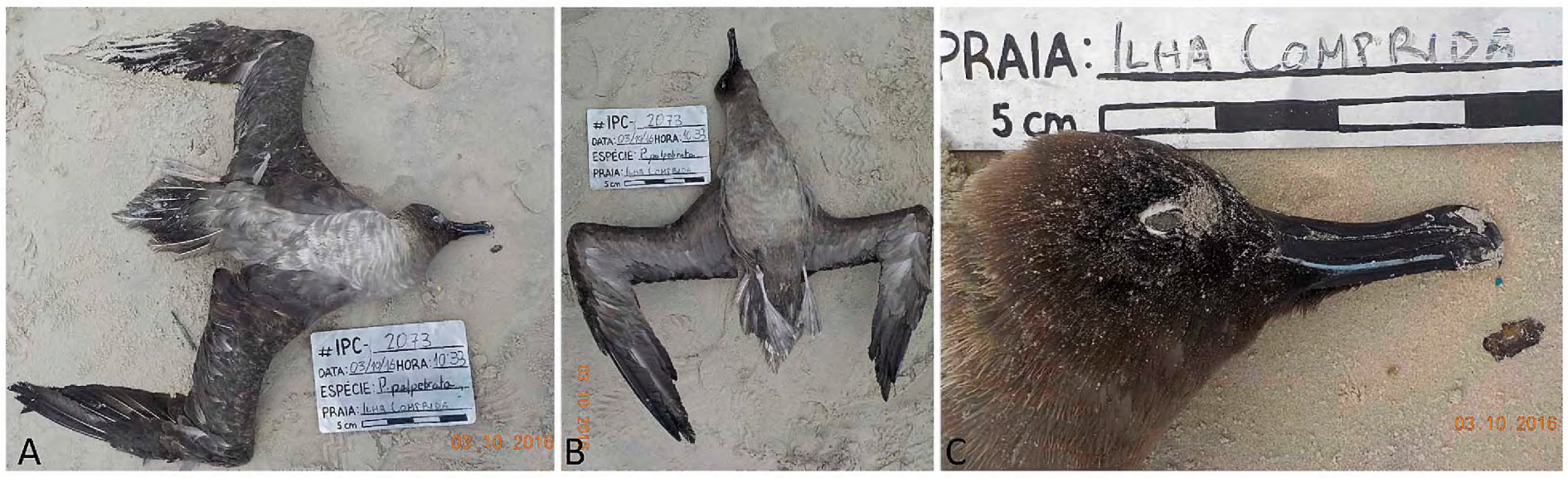

Figure 3. *Phoebetria palpebrata*, municipality of Ilha Comprida, state of São Paulo, Brazil. **A.** Dorsal view. **B.** Ventral view. **C.** Head, with the characteristic blue sulcus along the lower mandible.

Phoebetria palpebrata. The specimen had a distinctive frosty-gray mantle extending from neck to lower back and rump, contrasting with a dark brown head and wings (Fig. 3). The specimen also had a blue sulcus along the lower mandible (Fig. 3), which is cited by Harrison (1983) and Lima et al. (2004) as a distinctive character. The morphometries were as follows: total length 970.0 mm; head length 187.0 mm; exposed culmen 106.0 mm; wing chord 509.0 mm; tail 255.0 mm; tarsus 80.0 mm; middle toe with claw 124.0 mm; middle toe without claw 110.0 mm.

Discussion

Lugensa brevirostris. and *Phoebetria palpebrata* have oceanic habits (Bugoni and Furness 2009), and therefore, their occurrence on the Brazilian coast is sporadic, which explains the few records for both (Sick 2001, Bugoni and Furness 2009). We cannot rule out that the difficulty separating *L. brevirostris* from similar species has led to some mistaken identifications. Regarding *P. palpebrata*, its occurrence is more restricted to the sub-Antarctic region (Harrison 1983), which reduces even further its chances of being recorded in Brazil. Therefore, in this context, we emphasize the importance of regular monitoring along the coast.

Historically, *L. brevirostris* had been on the list of birds of the state of São Paulo until 1985, when 2 skins collected in 1938 and thought to be this species were later re-identified as *Puffinus griseus* (Gmelin, 1789), Sooty Shearwater (Escalante 1979). Similarly for *P. palpebrata*, 1 individual recorded in 1954 on the coast of the state of São Paulo was later identified as *Phoebetria fusca* (Hilsenberg, 1822), Sooty Albatross (Willis and Oniki 1985). However, we present documented records of these species (sensu Carlos et al. 2010) that support their inclusion to the list of birds of the state of São Paulo.

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Authors' Contributions

HC wrote the manuscript, identified of the specimens; BM and VM reviewed of the manuscript and collected the specimens.

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